



Spirituality Among a College Student Cohort: A Quantitative Assessment

Dixie Dennis, Susan M. Muller, Kim Miller, and Priya Banerjee

ABSTRACT

This study was designed to quantify indices of spirituality, the directing health dimension, which affects health and life satisfaction. Because college marks a time when life patterns are established, a college population was chosen. A cohort of 524 Northeastern U.S. college students completed the 48-item Life Attitude Profile-Revised in the fall semester 2002. Overall, results revealed that these students demonstrated a moderate degree of spirituality, with women indicating a higher measure of spirituality than men. Also, women in this study were found to have clearer goals and a keener sense about why they are "here." Men, on the other hand, were less satisfied with life, suggesting that they were searching for their identities. These findings imply that health educators may need to help students, particularly men, search for and enhance their degree of spirituality so that they may be healthier and establish positive life patterns for adulthood. A "spiritual norming" campaign may be helpful for these students.

"I feel like a failure because I'm struggling to become something, and I don't even know what it is. Some day, if I discover my purpose, I'll feel I'm beginning to live."
20-year-old male college student (Warren, 2002, p. 30)

For more than 20 years health educators and medical professionals consistently defined spirituality as a person's internal sense of purpose, meaning, and/or future (Abels, 2000; Bensley, 1998; Dennis & Dennis, 2003; Dorsey, 2000; Eberst, 1984; McBride, Borrks, & Pilkington, 1998; Russell, 1979). Rick Warren (2002), author of a current bestselling book, *The Purpose Driven Life*, explained the importance of spirituality for successfully living life. He wrote,

Without a clear purpose, you will keep changing direction, jobs, relationships, churches, or other externals—hoping each change will settle the confusion... You think, "Maybe this time it will be different." But it doesn't solve your real prob-

lem—a lack of focus and purpose. (p. 32)

Many physicians add that having a strong sense of spirituality affects health positively (DiSante, 2003; Dunn, 1959; "Making a Place for Spirituality," 1998; McBride, et al., 1998; Miller, 1999), and research shows that people with higher levels of purpose and meaning, or spirituality, tend to be healthier (Holt, Clark, Kreuter, & Rubio, 2003; Konig, 2002). More specifically, in a study involving 235 college students, Knox, Langehough, Walters, and Rowley (1998) found that students who scored higher on the Allport Spirituality Scale (Allport & Ross, 1967) also had higher self-esteem, engaged in fewer antisocial behaviors (e.g., stealing, getting into trouble with the police, and damaging property), and were more capable of "surviving on their own."

Many times, people confuse religion with spirituality. Religion concerns an organized belief system with particular rituals and practices, which are learned primarily in places of worship. Spirituality, on the

other hand, is a way of being (learned anywhere), which predetermines how people respond to life experiences. These people can have a deep sense of spirituality without any formal religious participation (Walker & Dixon, 2002). Although religion may be an outward manifestation of spirituality, religiousness does not guarantee spirituality (Reker, 2003). Indices of being spiritual include having life goals, direction, and eagerness for living (Reker, 1999), all of which are unnecessary for practicing religion. Although these definitions reveal that religion and spirituality are two distinct

Dixie Dennis, PhD, is an associate professor at University of Maryland Eastern Shore, 1102 Spaulding Building, 1 Backbone Road, Princess Anne, MD 21853; E-mail: dldennis@umes.edu. Susan M. Muller, PhD, is with Salisbury University in Salisbury, MD. Kim Miller, PhD, is with the University of Kentucky, Lexington. Priya Banerjee, PhD is with SUNY Brockport in Brockport, NY.



entities, it is nevertheless still confusing that while a person may be one or the other, he or she also may be neither or both (Chandler, Holden, & Kolander, 1992; Dennis & Dennis, 2002).

Among a person's health dimensions (physical, mental, emotional, social, and spiritual), the spiritual dimension is believed by some to be the guiding dimension (Clinebell, 1995; Russell, 1979). When the spiritual dimension is positively changed, it is claimed the whole person is more positive (Russell, 1979). Yet, the spiritual dimension of health may be attained differently than physical, mental, emotional, and social dimensions. Kurtz and Ketcham (1992), authors of *The Spirituality of Imperfection*, explained that spirituality is one of those qualities that people may have only while seeking it. Yet college students may not know how to seek spirituality.

Schwartz (2001), author of the article, "Growing Spirituality During the College Years," believes that college students are "hungry for deeper meaning" (p. 32), but they do not know how or where to begin their search. Schwartz added that without practicing one's spirituality, life becomes "frozen," meaning that life could not move positively forward. This situation, it would seem, could set a negative life pattern. This pattern may be especially noticeable in men, who are reported to score lower on general assessments involving spirituality than women (Knox, et al., 1998; Reker, 1999).

Nevertheless, few studies exist regarding the degree of spirituality among college students (Adams, Bezner, Drabbs, Zambarano, & Steinhardt, 2000). Adams and colleagues explained that their attempt to measure spirituality in a college student population was "one of the first data-based attempts" (p. 171). Of the studies in which other researchers have attempted to measure spirituality among a college student population using the Life Attitude Profile-Revised (LAP-R) survey, only certain sections of the survey were used, and older versions were used. For example, in the Nicholson and colleagues (1994) study regarding drug abuse and meaning in life, an older version

of the LAP-R was used and not all survey sections were analyzed. Likewise, in the works of Adams and associates, an older version of the LAP-R was used and only particular sections of it were correlated with psychological dimensions of wellness. In other research in which the entire LAP-R survey (all versions) was used, populations other than college students were involved. Fry's (2000) study on institutional care elders or Connor's and Vallerand's (1998) study on nursing home residents are examples. Still other researchers, Vickberg, Bovjerg, DuHamel, Currie, and Redd (2000) or VandeCreek (1991), for example, used sick or once-sick populations to administer either version of the survey. Of the few spirituality studies that have been conducted using surveys other than the LAP-R survey, spirituality and religion frequently were intertwined (the Allport Spirituality Scale (1967) used in the Knox et al. [1998] study, for example). In other words, no studies exist wherein all spirituality indices included in the most recent Reker (1999) LAP-R survey have been conducted to determine the degree of spirituality among a college student population in general as well as gender specific spiritual indices scores.

Because college marks a time when young people seek and explore life's direction as well as establish life patterns for adulthood (Sparling & Snow, 2002; Taylor, 1999) and because spirituality is perceived as the "directing" component of health (Russell, 1979), it seems imperative for health educators to know the degree of spirituality among college students as well as encourage these students to positively expand their spiritual dimension of health. In the past, college students have not gleaned a deeper sense of their spiritual dimension from many health educators, mostly because many of these educators believed that they did not know what spirituality entails or how to teach it (Kessler, 2000). The purpose of this study was to quantify spirituality in general as well as to determine any gender-based differences among specific spiritual indices among a cohort of college students to determine any

low scores in which interested health educators could focus their efforts to encourage students to enhance.

METHOD

Participants

This study was conducted during the fall semester 2002. Study participants were a cohort group of 524 Northeastern United States university undergraduate students who were enrolled in all 22 sections of a health/fitness core course. The course is required of all students completing a bachelor's degree.

After obtaining approval from the university Human Subjects Committee and permission from each class instructor, students were surveyed at a time suitable to the instructor. In addition to completing the 48-item survey, students reported age and gender. Two subscales of this survey (Purpose and Choice/Responsibility) were used in another manuscript involving the relationship of students' spirituality to their body mass index.

Survey

The LAP-R (Reker, 1999) originally was developed as the Life Attitude Profile by Reker and Peacock in 1981. The 48-question revised version used in this study was designed to measure meaning in life among individuals of all ages from adolescence to later adulthood. Because the word *spirituality* is avoided and no religious practices are mentioned, the survey appears not to bias people regarding any previous beliefs or practices regarding spirituality or the related concept of religion. A fifth-grade reading level is required to complete the approximately 15-minute survey. A sample of 750 people, most of whom were 17- to 24-year-old university students, provided normative scores in 1981 (Reker, 1999). Coefficients of internal consistency for young adults (17-27 years old) ranged from 0.77 to 0.91 for all subscale and composite scores. Results of factor analysis lend strong support for the construct validity of the LAP-R, and concurrent validity was established from a series of eight previous

**Table 1. Overall Mean Dimension and Composite Scores for Current Study and National Norms**

LAP-R Dimensions	Mean (\pm SD)		Mean (\pm SD)	
	This Study		1981 Nat'l Norms	
Purpose in Life (PU)	41.55	(8.74)	40.03	(8.44)
Coherence (CO)	40.68	(6.33)	38.40	(8.30)
Choice/Responsibleness (CR)	44.50	(6.38)	44.94	(6.52)
Death/Acceptance (DA)	36.76	(8.68)	36.13	(9.45)
Existential Vacuum (EV)	30.58	(8.06)	25.92	(8.70)
Goal Seeking (GS)	42.26	(5.84)	41.15	(7.74)
Composite Scales				
Personal Meaning Index (PMI)	75.84	(11.93)	78.43	(15.86)
Existential Transcendence (ET)	144.30	(18.62)	92.47	(31.18)

studies. From these results the LAP-R is viewed as a valid measure of current and future meaning and purpose in life. Also, it is predictive of outcome variables, including health and life satisfaction (Reker, 1999).

Each of the 48 questionnaire items is rated on a 7-point Likert-type scale of agreement (1–7), ranging from “*strongly agree*” (7) to “*strongly disagree*” (1). The LAP-R is scored and profiled in terms of six subscales (Purpose [PU], Coherence [CO], Choice/Responsibleness [CR], Death Acceptance [DA], Existential Vacuum [EV], and Goal Seeking [GS]) and two composite scales (Personal Meaning Index [PMI] and Existential Transcendence [ET]).

The PU subscale refers to having life goals, having a mission in life, having a sense of direction from the past, in the present, and toward the future. Implicit in PU is the notion of what is centrally important in a person's life. The CO dimension refers to an intuitive understanding of self, others, and life in general. CO gives an indication of a person's belief in his/her reason for existence. The CR subscale refers to the perception of freedom to make all of life's choices. CR provides an index of the degree to which a person perceives she/he is directing his/her life. DA refers to having an absence of fear regarding death as well as an acceptance of death as a natural aspect of life. The EV subscale refers to having a lack of meaning and direction in life. GS refers

to one's eagerness to get more out of life.

The PMI ($PMI = PU + CO$) composite score was developed to provide a more focused measure of a person's personal meaning. PMI refers to having life goals, as well as a mission and sense of direction in life. The other composite score, ET, is a global measure of attitudes toward life that takes into account both the degree to which meaning and purpose has been discovered and the motivation to find meaning and purpose. ET is derived from the following formula: $PU + CO + CR + DA - (EV + GS)$

Statistical Analysis

A *t*-test for equality of means was conducted on all data using SPSS® to determine the difference between degrees of spirituality as expressed by men and women. All comparisons were made assuming an $\alpha = 0.05$ significance level with two-tailed comparisons. In addition, means and standard deviations were assessed for all data.

RESULTS

Overall

The mean age for the 524 students ($M = 49\%$, $F = 51\%$) was 19.2 ± 2.08 . Table 1 illustrates the overall means and standard deviations for men and women in each of the six LAP-R dimensions and two composite scales, whereas Table 2 shows overall individual scores for men and women. The CR dimension had the highest mean (44.50)

and comparatively low standard deviation (6.38), suggesting that the group tested was homogeneous in having a high sense of freedom regarding making all life choices, believed that they were able to exercise personal decision-making, and had a high internal locus of control. These scores were almost identical ($\mu = 44.94$, $\sigma = 6.52$) to those reported as national norms (Reker & Peacock, 1981). The scores most different from the national norms were ET, 144.30 ± 18.62 for this sample versus 92.47 ± 31.18 for the national norm. In Table 3 an item-wise difference between men and women regarding their expressions of spirituality is depicted.

PU

A statistically significant difference between the means of men and women regarding the PU dimension was apparent in the two items stating, “I have clear goals and aims” ($t = -2.68$ [95% confidence interval [CI] = -0.455, -0.052]) and “I have discovered a satisfying life purpose” ($t = -2.039$ [95% CI = -0.481, -0.009]).

CO

In the CO dimension men and women differed significantly in terms of their mean responses to the statements, “I am aware of a powerful purpose toward which my life has been directed” ($t = -1.99$, [95% CI = -0.525, -0.004]); “Thinking of my life, I see a reason for my being here,” ($t = -2.24$, [95% CI = -0.487, -0.032]); “Parts of my life fit in a unified pattern” ($t = -2.88$, [95% CI = -0.517, -0.098]); “I have a clear understanding of the ultimate meaning in life” ($t = -4.32$, [95% CI = -0.900, -0.338]); and “My personal existence is orderly and coherent” ($t = -2.27$, [95% CI = -0.481, -0.035]). The mean responses of men and women in the CO dimension as a whole were statistically significantly different ($t = -2.11$, [95% CI = -2.24, -0.082]).

CR

There were no statistically significant differences between the mean responses of men and women regarding the CR dimension. To reiterate, the group was homogeneous in its opinion regarding experiencing



a high internal locus of control and a high sense of freedom to make choices and decisions about their lives.

DA

Next to the EV dimension, the DA dimension contained the most statistically significant differences between the mean responses of men and women. In particular, men and women responded differently to the statements, "I am less concerned about death" ($t=3.47$, [95% CI=-0.217, 0.781]); "Death makes little difference to me" ($t=3.55$, [95% CI=0.255, 0.886]); "I am not concerned about the inevitability of death" ($t=3.14$, [95% CI=0.174, 0.752]); "I neither fear death nor do I welcome it" ($t=3.47$, [95% CI=-0.194, 0.698]); and "I am not frightened of death like others" ($t=2.301$, [95% CI=0.047, 0.594]).

EV

Statistically significant differences between the mean responses of men and women were assessed for the following statements in the EV dimension, "Something is missing from my life" ($t=2.85$, [95% CI=0.135, 0.729]); "I am destined to accomplish something important, but cannot put a finger on it" ($t=3.24$, [95% CI=-0.525, -0.004]); "New activities soon lose their attractiveness" ($t=2.35$, [95% CI=0.054, 0.588]); "I daydream of finding a new place for my life and a new identity" ($t=2.60$, [95% CI=0.103, 0.742]); "I find myself withdrawing from life with an, 'I don't care' attitude" ($t=3.15$, [95% CI=0.199, 0.855]); and "Life to me seems boring and uneventful" ($t=1.98$, [95% CI=0.003, 0.640]). All the mean values for the individual items for the men were higher than those of the women. The EV dimension reflects attitudes of boredom, apathy, lack of goals, lack of a meaning in life, and feelings of indifference (Reker & Peacock, 1981). Among all the dimensions the statistical significance between the mean responses for men and women was assessed at $p<.000$, $t=4.16$, [95% CI=1.528, 4.260].

GS

Only one statement in the GS dimension elicited a statistically significant difference

Table 2. Overall Dimension and Composite Scores for Men and Women

LAP-R Dimensions	Men (N=260) Mean (\pm SD)	Women (N=264) Mean (\pm SD)	P-value
Purpose in Life (PU)	41.31 (10.40)	41.84 (6.76)	.493
Coherence (CO)	40.12 (6.62)	41.28 (5.97)	.035 *
Choice/Responsibleness (CR)	44.40 (6.62)	44.61 (6.52)	.709
Death/Acceptance (DA)	38.13 (8.59)	35.37 (8.58)	.000**
Existential Vacuum (EV)	32.03 (7.67)	29.14 (8.21)	.000**
Goal Seeking (GS)	42.49 (5.74)	42.05 (5.97)	.393
Composite Scales			
Personal Meaning Index (PMI)	74.62 (12.38)	77.12 (11.36)	.016 *
Existential Transcendence (ET)	143.60 (18.82)	145.06 (18.41)	.369
T-test significant at * $p<.05$; ** $p<.01$			

in the mean responses of men and women: "I would enjoy breaking loose from the routine of life" ($t=2.024$, [95% CI=0.008, 0.534]). The mean for males was higher (5.12) than that of females (4.85).

PMI

The PMI comprises the PU and CO dimensions of the LAP-R. The mean responses of men and women were statistically significant for this scale ($t=-2.406$, [95% CI=-4.551, -0.460]). The PMI is designed to depict a sharper focus on personal meaning, in particular, life-goals; a sense of direction; a logical, consistent understanding of the self, others, and life in general. A statistically significant difference in the mean responses of men and women also reflects the national normative sample, wherein the mean responses by the men were lower (74.62) than those of the women (77.12).

ET

Unlike the PMI, the ET composite scale reflected no statistically significant difference in the responses by men and women. In this composite score the group deviated from the national normative sample.

DISCUSSION

Results of this study suggest that this cohort of students demonstrated a moderate degree of spirituality in the sense that the overall mean scores for PMI (life goals,

sense of direction, and self-understanding) was 75.84 out of a possible score of 112 (Likert-type score of 7 [*strongly agree*] times 8 questions each in PU and CO). Even higher levels of ET, the other composite score, which describes a broader view of the meaning of life beyond the personal level, were indicated for students. "A person who has achieved Existential Transcendence has a new perspective on life, has internalized successes, has risen above the failures of living, ...and views life as meaningful" (Reker, 1999, p. 20). That these scores were substantially higher than the 1981 normative sample suggests that these college students may view life more meaningfully than college students 20 years ago. The differences in our sample from the national normative sample could be attributed in part, however, to teens being able to express their meaningfulness more easily today than those teens from two decades ago.

The highest score for a dimension for the overall group was CR. This score reflects high levels of internal locus of control and a high sense of freedom among the group. This finding is not surprising, because college students frequently are experiencing their first taste of freedom and autonomy from parents and authority.

The lowest overall mean score (30.58) on a dimension was on EV. Absence of EV (i.e., more meaning in life), however, would be

**Table 3. Dimension Item-Wise Differences for Men and Women**

Dimension (Items)	Men (N=260)	Women (N=264)	P-value
Purpose in Life (PU)	Mean (SD)	Mean (SD)	
Past achievements give my life meaning.	5.92 (1.15)	6.00 (.989)	.414
I have clear goals and aims.	5.52 (1.24)	5.77 (1.10)	.014*
I have discovered a satisfying life purpose.	5.06(1.40)	5.30 (1.34)	.042*
I live the kind of life I want to live.	5.10 (1.42)	5.28 (1.38)	.143
I know where my life is going.	4.50 (1.61)	4.64 (1.55)	.299
In achieving life's goals, I have felt fulfilled.	4.23 (1.53)	4.32 (1.51)	.489
My mission in life gives me direction.	5.27 (1.33)	5.48 (1.23)	.062
Life runs over with exciting good things.	4.81 (1.50)	5.03 (1.41)	.081
Coherence (CO)			
The meaning of life is evident in the world around us.	4.35 (1.77)	4.52 (1.66)	.273
I am aware of a powerful purpose toward which my life has been directed.	4.54 (1.52)	4.80 (1.51)	.047*
My life philosophy gives significance to my life.	5.05 (1.45)	4.99 (1.52)	.637
Thinking of my life, I see a reason for my being here.	5.36 (1.36)	5.62 (1.28)	.025*
A framework helps me understand life.	4.96 (1.27)	5.15 (1.21)	.076
Parts of my life fit in a unified pattern.	4.95 (1.60)	5.25 (1.24)	.004**
I have a clear understanding of the ultimate meaning in life.	4.15 (1.71)	4.77 (1.55)	.000**
My personal existence is orderly and coherent.	5.06 (1.51)	4.93 (1.49)	.023*
Choice/Responsibleness (CR)			
Directing life is important.	6.14 (.974)	6.27 (1.12)	.168
My accomplishments are my effort.	6.06 (1.01)	6.04 (1.16)	.867
I determine what happens in my life.	5.39 (1.31)	5.44 (1.36)	.664
I am free to make all life choices.	5.19 (1.47)	5.28 (1.38)	.702
I can live my life the way I want to.	5.39 (1.22)	5.39 (1.36)	.998
My life is in my hands, I am in control.	5.10 (1.44)	5.11 (1.50)	.962
Regarding important life matters, I make my own choices.	5.26 (1.41)	5.16 (1.52)	.444
I accept personal responsibility for my own life.	5.88 (1.14)	5.97 (1.02)	.393

attained with a mean score of 8 (Likert score of 1 times 8 questions). Therefore, these students as a group were experiencing at least moderate lack of direction and meaning in their lives.

Although women consistently have shown a higher degree of overall spirituality (Reker, 1999; Knox et al., 1998), it is compelling that these data show a clear and consistent pattern by which men and women differed on several of the dimension subscales. The pattern of these differences provides some interesting insights into the spiritual lives of these college students. For example, significant differences existed be-

tween men and women respondents on the items on the subscales PU, CO, DA, EV, and GS. Specifically, women had significantly higher mean scores on items related to PU and CO, whereas the mean score on items related to DA, EV, and GS were higher among male respondents.

Although the PU subscale mean score in this study was similar to the 1981 national norm mean score, 41.55 and 40.03, respectively, each mean was much lower than the PU mean score (47.8) reported by Adams and colleagues (2000). Adams and associates, however, used the unrevised version of the survey in which PU questions were not

identical to the newer version that we used.

Questions for the PU subscale in our study for which women had higher scores than men were the statements "I have clear goals and aims," and "I have discovered a satisfying life purpose." This finding may indicate that at the time of the study the female respondents believed that they had a greater sense of direction and clarity regarding their lives than did their male counterparts.

Several items on the CO subscale resulted in higher scores for women compared with men in the study, including, "I am aware of a powerful purpose toward which



Table 3. (Continued)

Death/Acceptance (DA)			
I am less concerned about death than others.	4.71 (1.58)	4.21 (1.69)	.001**
Death makes little difference to me.	3.66 (1.88)	3.09 (1.78)	.000**
I am not concerned about the inevitability of death.	5.03 (1.67)	4.57 (1.68)	.002**
I neither fear death nor welcome it.	5.18 (1.46)	4.73 (1.46)	.001**
There is no sense in worrying about death.	5.11 (1.52)	4.88 (1.54)	.088
I am not frightened of death like others.	4.64 (1.60)	4.32 (1.58)	.022*
The thought of death seldom enters my mind.	4.74 (1.69)	4.63 (1.72)	.448
I accept death as another life experience.	5.06 (1.51)	4.93 (1.49)	.324
Existential Vacuum (EV)			
I seem to change my main objectives in life.	3.75(1.66)	3.54(1.54)	.124
Something is missing from my life.	4.51(1.70)	4.08(1.75)	.004**
I feel a lack of and a need to find real meaning in my life.	3.73(1.71)	3.50(1.84)	.126
New activities soon lose their attractiveness.	3.91(1.51)	3.59(1.59)	.019*
I am destined to accomplish something important, but I cannot put my finger on it.	4.95(1.42)	4.51(1.66)	.001**
I daydream of finding a new place for my life and a new identity.	4.15(1.92)	3.73(1.80)	.010**
I find myself withdrawing from life with an "I don't care" attitude.	3.80(1.88)	3.27(1.93)	.002**
Life to me seems boring and uneventful.	3.22(1.83)	2.90(1.88)	.048*
Goal-Seeking (GS)			
New and different things appeal to me.	5.74 (1.19)	5.76 (1.24)	.830
I would enjoy breaking loose from the routine of life.	5.12 (1.48)	4.85 (1.57)	.043*
I am restless.	4.36 (1.71)	4.12 (1.76)	.113
I feel the need for adventure and "new worlds to conquer."	5.26 (1.46)	5.14 (1.38)	.361
A new challenge in my life would appeal to me now.	4.62 (1.51)	4.61 (1.57)	.980
I hope for something exciting in the future.	6.14 (1.10)	6.25 (1.00)	.244
I am eager to get more out of my life than I have so far.	5.41 (1.60)	5.31 (1.63)	.510
I am determined to achieve new goals in the future.	5.81 (1.27)	6.00 (1.22)	.073
T-test significant at *p<.05; **p<.01			

my life has been directed;" "Thinking of my life, I see a reason for my being here;" and "I have a clear understanding of the ultimate meaning in my life." Overall, women in this study appeared to believe there is a reason for their existence and that their lives "make sense" more than did the men.

It is particularly interesting to note that the mean score for men on the subscale DA was higher compared with women in this study. Items to assess this subscale on which men scored higher included "I am less concerned about death than others," "Death makes little difference to me," and "I am not frightened of death like others." These

higher scores should not be surprising, because men in this study seemed to have a lesser sense of purpose and direction in their lives compared with women. If one does not see a clear purpose for his/her existence, the notion of not existing, or death, should be less threatening.

The subscale EV revealed significantly higher scores for men than for women in this study. Some items on which men had higher scores included "Something is missing from my life;" "I am destined to accomplish something important, but I cannot put my finger on it;" and "I daydream of finding a new place for my life and a new iden-

tity." Again, these results are consistent with those previously discussed, implying that if one does not have a clear purpose in life, one may believe that something is missing and that he is not accomplishing his destiny as well as believing that he is experiencing a general lack of identity or focus (Warren, 2002). Possibly, too, these results indicate that male students have lower self-esteem than women (Knox et al., 1998). Also, men in this study may lack the ability to positively move forward in life more than the women (Swartz, 2001).

The final subscale, GS, was the other dimension on which gender-related differences



were found. Only one of the items on the subscale resulted in differences: "I would enjoy breaking loose from the routine of life." It is difficult to make an interpretation of this result, because it represents only one item on the subscale. One would expect to see higher scores on some of the other items in the subscale such as "I am restless" or "I hope for something more exciting in the future." Because higher scores did not exist, it would be inappropriate to make broad conclusions about the meaning of this result.

Although a more in-depth understanding of this cohort of college students' spirituality is interesting and potentially valuable to health educators, these results may make a greater contribution in that they may offer some explanation about the role of spirituality in other health behaviors. For example, data from the National College Health Risk Behavior Survey (Centers for Disease Control and Prevention [CDC], 1997) indicate that men consistently reported higher rates of violence and self-destructive behaviors compared with women. Men, for instance, were more likely to rarely or never use safety belts when riding in a car being driven by someone else and were significantly more likely than women to have driven a vehicle after drinking. Men were more likely to engage in a physical fight and also were more likely to use tobacco and report current episodic drinking than their female counterparts (CDC). If male college students have less fear of death, sense a lack of meaning and direction, and feel withdrawn from others, it is not surprising that they also would engage in activities that reflect this lack of meaning and connection.

The importance of recognizing the influence of spirituality on health behavior and life satisfaction cannot be underestimated. Health educators such as Holt and colleagues (2003) and physicians such as Konig (2002) are increasingly becoming aware that health behavior occurs within a context, and that educators and physicians must seek to understand these contexts. Introducing concepts related to spirituality among college students may help health educators become more effective as we aim

to positively impact the lives of our students as they establish positive life patterns for adulthood (Schwartz, 2001), find solutions to life's problems (Guillory, 2001), possibly have higher self esteem and/or engage in fewer antisocial behaviors (Knox et al., 1998), and become generally more healthy (Holt et al., 2003).

Although this study makes a positive contribution to health educators' knowledge regarding spirituality among one college student population, limitations exist. First, it is important to acknowledge that spirituality is difficult to quantify due to its abstract nature. Attempting to quantify spirituality, however, is important to understand it better (Adams et al., 2000). Also, the cross-section design of this study limits the generalizability of the conclusion that many spiritual indices are higher among women than men. Using a longitudinal study in which control groups not receiving any spirituality instruction are compared with experimental groups who received spiritual information and enhancement from health educators would not only enable researchers to get a more accurate account of spirituality among college students in general and gender differences specifically but would allow health educators to realize their effects on students' spirituality. Next, the sample size was not only small but also represented only a rural, small-town college student cohort. A larger and more representative sample could increase generalizability of results. The high correlation cannot be overlooked, however, between spirituality among these students and Reker's (1981) normative sample.

CONCLUSIONS

Results from this study suggest that this cohort of college students had a moderate degree of spirituality. Gender differences existed among specific indices of spirituality, however. Although women in this study were found to have more meaning in life (that is, they were "more spiritual"), clearer goals, and a sense about why they are "here," men were less satisfied with life, suggesting that they were searching for their identities and had less personal meaning (that is, they

were "less spiritual").

Lack of meaning, or less spirituality, especially among male college students points to the need for health educators to consider looking more deeply at the time we devote to instructing students about their spiritual dimension of health. Although some health educators may believe that it is beyond their expertise to incorporate issues of spirituality into their teaching or programming (Kessler, 2000), it is possible, without being an expert in spirituality, to provide opportunities for students to reflect on their lives and the health-related decisions they make. First, by creating a learning environment in which self-examination is emphasized, talking about what is meaningful is encouraged, and questioning life's purpose through non-threatening learning strategies is acknowledged, health educators may help to enhance students' spirituality (Dennis & Dennis, 2002). For example, health educators may be helpful to students by asking them to think about potential links between what they believe is their life purpose and how that purpose affects their decisions regarding their health behaviors. Health educators also may encourage students to question life's meaning through personal reflection in daily journal writing.

Another opportunity that health educators can take to help students increase their spiritual dimension of health is to have students complete the *Student's Workbook for Exploring the Spiritual Journey* (Atkinson, 2001) as a practice in self-examination. This workbook was designed to allow students the opportunity to enhance their spiritual dimension of health through various activities such as readings, nature scenes, music, videos, and so on. After reflecting on their personal thoughts, students are invited to share these thoughts with other class members. Afterward, the health educator can encourage students to explore and practice the spiritual activities that they discovered while completing the workbook.

Schwartz (2001) suggested that, like "social norming" to reduce alcohol use among college students a few years ago, another type of norming—"spiritual norming"—



was needed on college campuses. In alcohol-norming campaigns, based on the phenomenon that students are likely to do what they believe their peers are doing, posters, billboards, radio and TV spots, and teen speakers, for example, “advertised” that not all youth drink alcohol. These campaigns helped some students believe that it is okay not to drink. A “spiritual norming” campaign using similar posters, billboards, radio and TV spots, and teen speakers to “advertise” that many teens are interested and actively involved in enhancing their spiritual dimension of health may help many students realize that most of their peers desire more spirituality. These students then may feel more free to openly search for spirituality, which enhances and directs life (Clinebell, 1995).

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